Death Valley Ranch Gravel Plant/Bunker (Gravel Separator) Death Valley National Monument Inyo County California

HABS CAL, IH-DVNM I-J-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
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HISTORIC AMERICAN BUILDINGS SURVEY

HABS CAL, H-DVIM, 1-5-

DEATH VALLEY RANCH GRAVEL PLANT/BUNKER (Scotty's Castle, Gravel Separator)

HABS No. CA-2257 J

Location:

National Park Service Route 5 (commonly known as the North Highway), 25 miles west of the junction of US Route 95 with

Nevada State Route 267 (commonly known as Scotty's Junction), Death Valley National Monument, Inyo County,

California.

Present Owner:

National Park Service.

Present Use:

Non-functional. The NPS is presently undergoing efforts to stabilize the wood cribbing by constructing wood braces that are banked into the ground in front of the structure.

Significance:

Gravel and sand washing was a large part of the construction operations at Death Valley Ranch from the outset. The tremendous reliance on the use of concrete for almost every structure at the Ranch made providing their own aggregates a cost-saving measure. The surviving structure illustrates Johnson's willingness to experiment with and utilize

different technologies.

PART I. HISTORICAL INFORMATION

Note: For general information on the Death Valley Ranch complex, see HABS No. CA-2257.

A. Physical History:

1. Date of Erection:

By December 1925 - The previous "gravel pit," located "between the two springs" was made operational.\(^1\)
March 1926 - The operation was moved to its present location and referred to as the "gravel bunkers.\(^2\)
August and September 1930 - Plans were prepared by Thompson to enlarge the facility.\(^3\)
By October 1930 - The facility was enlarged to approximately four times its previous size and put into operation.\(^4\)

2. Engineer: The system was probably designed by M. Roy Thompson and Albert M. Johnson in concert with The Stephens-Adamson Mfg. Co., the supplier of the machinery.

3. Original and Subsequent Owners:

Albert Mussey Johnson (1926-1948). Gospel Foundation (1948-1970). National Park Service (1970-Present)

4. Builder, Manufacturer, etc:

General Superintendent - M.Roy Thompson
Building Superintendent - F.X.A. Kreil (1925-1927)
H. B. Brown (1927-1930)
G. G. Johnson (1930-1931)

Manufacturers of gravel washing, conveying and screening machinery - Stephens-Adamson Mfg. Go., Los Angeles, Galifornia.

5. Original plans and construction: The first "gravel pit" operation was located "between the two springs." Men pushed wheelbarrows of dirt up a 40 foot incline, dumped them onto a 10 foot length of sloping corrugated iron and washed it all down over a half-inch screen to separate sand and gravel for use in construction. Because the soil there proved to contain too much sand, by March 1926 a "gravel bunker" was constructed in "the wash just west of the lower field. The new location necessitated the laying of 600 feet of 2" water piping to supply it with water.

In August and September 1930, Thompson oversaw the arrangements for the enlargement of the facility to almost four times its previous size. By October, construction was completed and Thompson was able to report that "[t]he new gravel and sand plant works perfectly and turns out excellent material at less than one-third the former cost. It will pay for itself in a short time." The facility was designed to handle "between one hundred and one hundred and fifty yards per day of sand and gravel."

6. Alterations and additions: The NPS is currently in the process of stabilizing the structure after many years of neglect and decay. Over the years flash floods have swept down the canyon and have buried the first few feet of the facility. The present plans include excavation of the lower portions of the timber cribbing and constructing large wooden braces banked into the sand to prevent the cribbing from bulging out any further. Plans to proceed beyond this point will be evaluated once this portion of the work is completed.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

- 1. Architectural Character: Although in a state of disrepair, the facility is still not beyond restoration. The 8" x 8" railroad tie timber cribbing is reinforced with steel, and forms the exterior wall for the three sides of the structure. In the rear is an inclined slope for trucks and equipment to reach the upper platform to dump loads of sand and gravel. A wooden guard rail with several missing members runs along the top for the length of the east facade. All the washing and conveying equipment was on this side, most of which was suspended by a timber platform approximately 20' square in size that extends out from the main bulkhead. The facility retains much of the original equipment, such as the tapered rotary drum, a conveyer belt, gearing and screens, used to separate and wash gravel and sand.
- 2. Condition of Fabric: Poor.

B. Description of Exterior:

- 1. Over-all dimensions: 105' long x 26' wide x 16' high.
- 2. Foundations: Railroad tie framing throughout.
- 3. Structural system, framing: The three exterior sides are constructed of 8" x 8" railroad ties in a crib-like fashion. They are joined by steel reinforcement bar. The two shorter sidewalls are strengthened with a second inner wall of the same type and size. The area above is just hard-packed dirt and gravel. A wooden guard rail with several members now missing runs around the perimeter.

D. Site:

The structure in plan is U-shaped and faces southeast. It sits in the midst of a large wash running down Grapevine Canyon and flood waters present a maintenance problem because of it. Although the facility is somewhat removed from the Castle grounds proper, it is quite visible from some higher vantage points, such as the upper story of the Main House. Space for overflow parking that borders the structure to the northwest and northeast was created by the NPS. A temporary wire fence surrounds the structure to prevent visitors and unauthorized personnel from climbing it and resulting in injury or permanent damage.

PART III. PROJECT INFORMATION

The Scotty's Castle Recording Project at Death Valley National Monument, California, was undertaken during the summers 1987-89 by the Historic American Buildings Survey (HABS) division of the National Park Service, and cosponsored by the Western Regional Office of the National Park Service. Principals involved were Robert J. Kapsch, Chief of HABS/HAER; Kenneth L. Anderson, AIA, Chief of HABS and project leader in 1987 and 1988; and Paul D. Dolinsky, Principal Architect of HABS and project leader in 1989.

The recording teams were supervised in the field by Marlys B. Thurber in 1987, John White in 1988, and Joseph D. Balachowski in 1989. The written documentation was prepared by Richard A. Bernstein of Cornell University in 1987.

PART IV. SOURCES OF INFORMATION

The repository of nearly all of the sources of information is the Reference Library and Preservation Office, Scotty's Castle, Death Valley National Monument, California. Individual references take the form of endnotes, as follows:

- 1. Letter from M. Roy Thompson to Albert M. Johnson dated December 31, 1925. Manuscript 7, box 1.
- 2. Letter from M. Roy Thompson to Albert M. Johnson dated March 16, 1926. Manuscript 7, box 1.
- 3. Letters from M. Roy Thompson to Albert M. Johnson dated August 26, September 10, September 17 and September 29, 1930. Manuscript 7, box 12.
- 4. Letters from M. Roy Thompson to Albert M. Johnson dated October 3, October 8 and October 29, 1930. Manuscript 7, box 12.
- 5. Letter from M. Roy Thompson to Albert M. Johnson dated December 31, 1925. Manuscript 7, box 1.
- 6. Letter from M. Roy Thompson to Albert M. Johnson dated March 16, 1926. Manuscript 7, box 1.
- 7. Letter from M. Roy Thompson to Albert M. Johnson dated August 26, September 10 and September 17, 1930. Manuscript 7, box 12.
- 8. Letters from M. Roy Thompson to Albert M. Johnson dated October 3, October 8 and October 29, 1930. Manuscript 7, box 12.
- 9. Stephens-Adamson Mfg. Co., to M. Roy Thompson dated August 6, 1930. Manuscript 12, box 6.

ADDENDUM TO:
DEATH VALLEY RANCH, GRAVEL PLANT-BUNKER
(Gravel Separator)
Death Valley National Park
Death Valley Junction vicinity
Inyo County
California

HABS CA-2257-J CAL, 14-DVNM, 1-J-

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FIELD RECORDS

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